

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-II [All Branch] examination June 2009****Subject code: 110003****Subject Name: Computer programming & Utilization****Date: 10/06/2009****Time: 10:30am-1:00pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1

(a)	Draw flowchart to solve following series $1! + 2! + 3! + \dots + n!$	05
(b)	Compare Procedure oriented and Object oriented programming.	04
(c)	Write a C- program read in an array of integers and print its elements in reverse order.	05

Q.2

(a)	Find out the output of following C code. Assume all the libraries have been included and code is syntactically corrected.	07
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(i)

```
void main()
{
    int iX=7,iY=8,iZ=9;
    printf("\n %d %d %d",++iX,iX,iX++);
    printf("\n %d %d %d", iZ,++iZ,iZ++);
}
```

(ii)

```
void main()
{
    int iA = 6, iB = 6;
    int *P1 = &iA, *P2 = &iB;
    printf("\n %d",(*P1)++);
    printf("\n %d",--(*P2));
    printf("\n %d", ++(*P2)-*P1);
}
```

(b)	Explain various types of loop available in C with example.	07
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OR

(b)	Draw block diagram of computer and explain each block.	07
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Q.3

(a)	Explain various types of operator available in C	07
(b)	What is type conversion? Explain implicit type conversion and explicit type conversion with example	07

OR**Q.3**

(a)	Explain operator precedence and associativity	05
(b)	Explain break and continue with example	04
(c)	What do you mean by recursive function? Explain with example.	05

Q-4

(a) Define following	04
I. Operating System	
II. Compiler	
III. Application software	
IV. System Software	
(b) What is pointer ?Explain Array of pointer with example.	05
(c) Write a function (using a pointer parameter) that calculate maximum element from given array of integer numbers.	05

OR**Q. 4**

(a) Explain nested structure with example.	05
(b) What is user-defined function? Explain Actual argument and formal argument.	04
(c) Write a program to that read two string and compare them using the function strcmp() and print the message that first string is equal, less, greater than the second one.	05

Q.5

(a) Define Following	05
a) Define following terms	
I. Class	
II. Object	
III. Dynamic binding	
IV. Polymorphism	
V. Destructor	
(b) Explain characteristic of static data member and static member function.	05
(c) Explain various type of Access modifier in C++.	04

OR**Q.5**

(a) What are the different forms of Inheritance? Explain each form with example.	05
(b) What is friend function? Describe its characteristic.	05
(c) State whether following statement are true or false	04
I. Function can not return class objects	
II. A function designed as public can not be accessed like any other ordinary functions	
III. Destructor never take any argument	
IV. Inheritance aids data hiding	
